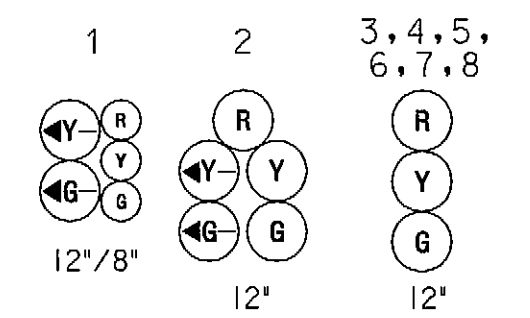


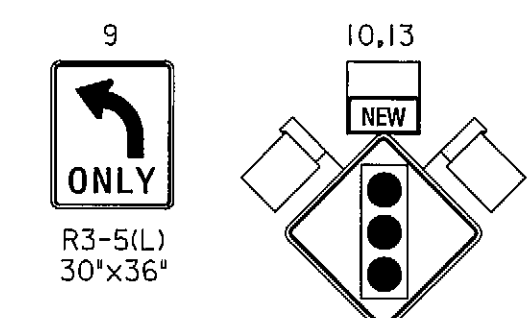
PROPOSED LED SIGNALS



PROPOSED VIDEO DETECTION

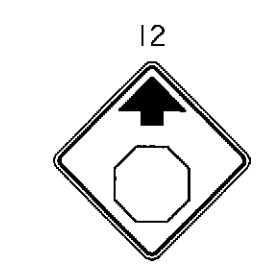


PROPOSED SIGNS

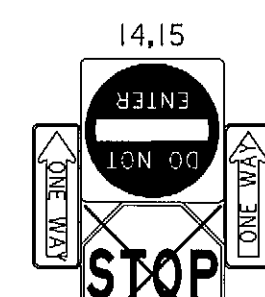


R3-2
(30'x30')

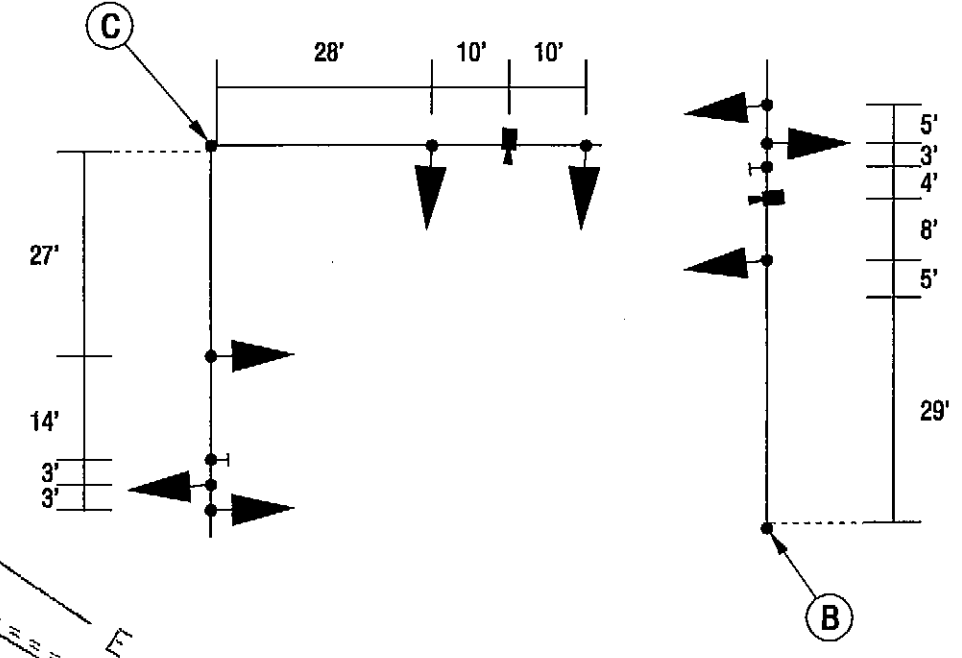
EXISTING SIGNS TO REMOVE



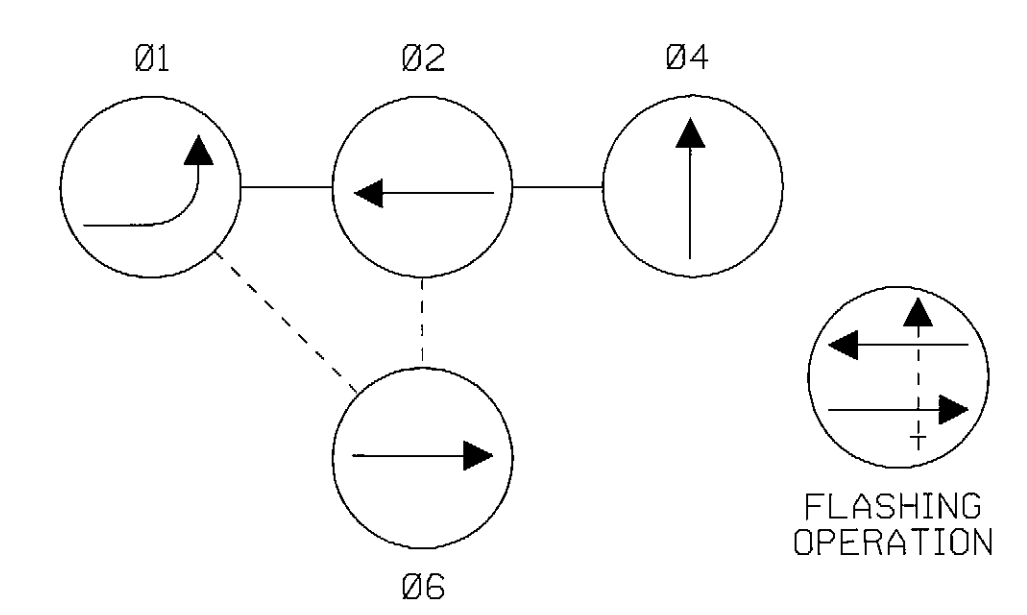
EXISTING SIGNS TO MODIFY



DIMENSIONS



NEMA PHASING

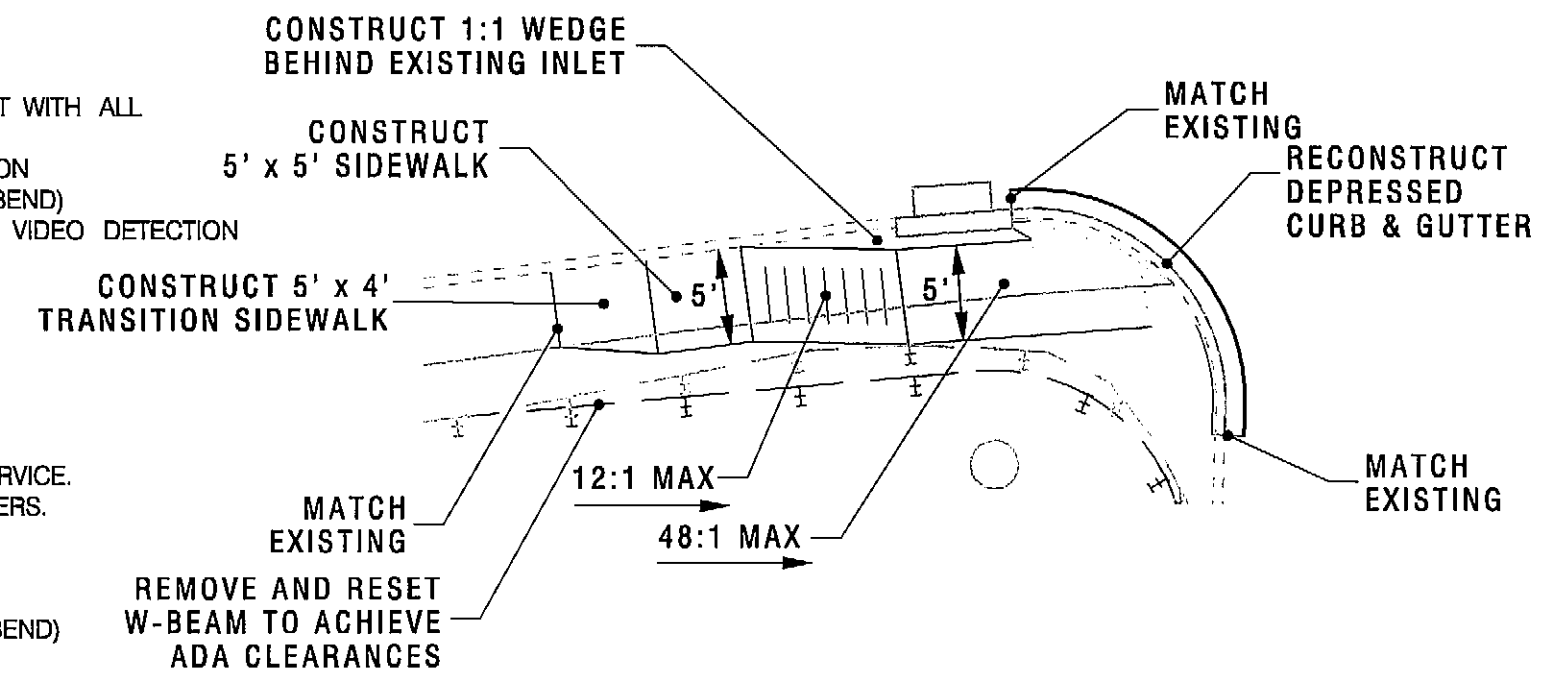


NOTE:
PHASES ASSOCIATED BY A DASHED LINE
MAY/WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE
WILL NOT OPERATE CONCURRENTLY.

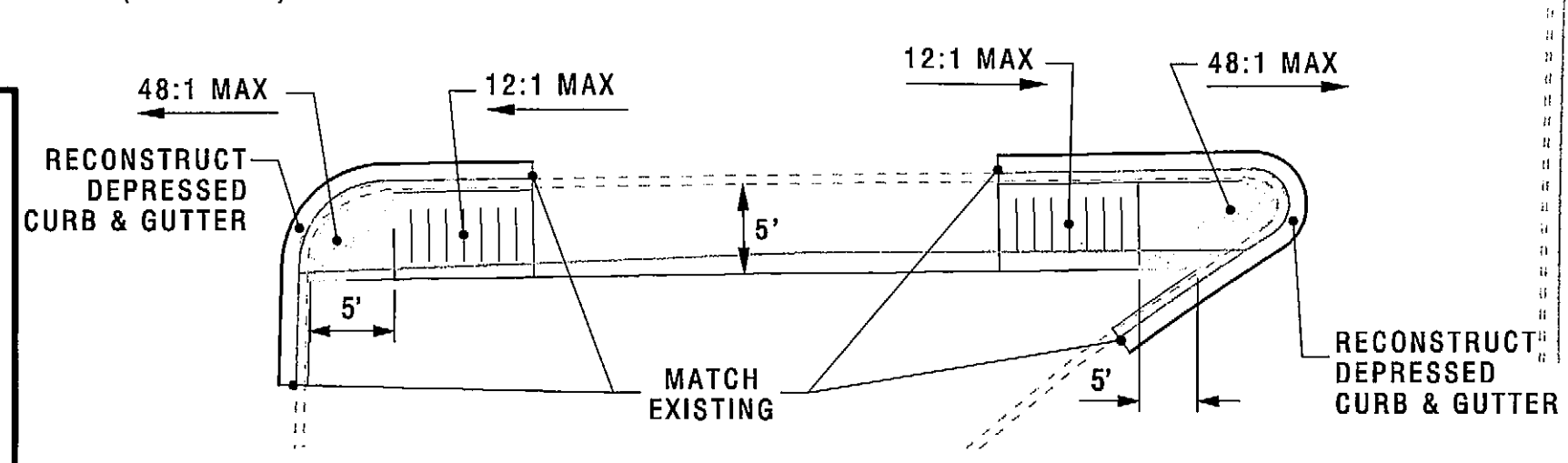
CONSTRUCTION DETAILS

- INSTALL EIGHT PHASE FULLY-ACTUATED CONTROLLER HOUSED IN A NEMA SIZE 6 BASE MOUNTED CABINET WITH ALL OF THE NECESSARY EQUIPMENT (NOTE: 2-2 IN. AND 2-4 IN. PVC 90 DEGREE BENDS).
- INSTALL 27 FT. STEEL POLE WITH A 60 FT. MAST ARM, FOUNDATION, TRAFFIC SIGNAL HEADS, VIDEO DETECTION CAMERA, SIGNS, AND 20 FT. LIGHTING ARM WITH 250 WATT HPS LUMINAIRE (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
- INSTALL 27 FT. STEEL POLE WITH TWIN 60 FT. MAST ARMS, FOUNDATION, TRAFFIC SIGNAL HEADS AND VIDEO DETECTION CAMERA (NOTE: 1-3 IN. PVC 90 DEGREE BEND).
- INSTALL 1 IN. LIQUID-TIGHT NON-METALLIC CONDUIT FOR DETECTOR SLEEVE.
- INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 3 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (BORED).
- INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED).
- INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (BORED).
- INSTALL 2 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) - FOR PROPOSED TELEPHONE SERVICE. CAP AND MARK CONDUIT, AND LEAVE A 1 FT. STUB WITH PULL STRING AT UTILITY POLE FOR USE BY OTHERS.
- INSTALL 4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) - FOR UNDERGROUND POWER SERVICE. THE CONTRACTOR SHALL CAP, MARK, AND LEAVE A ONE FOOT STUB WITH PULL STRING AT BASE OF UTILITY POLE FOR USE BY OTHERS.
- INSTALL METERED SERVICE PEDESTAL (NOTE 2-2 IN. PVC 90 DEGREE BENDS AND 1-4 IN. PVC 90 DEGREE BEND).
- INSTALL ELECTRICAL HANDHOLE.
- INSTALL NON-INVASIVE MICROLOOP PROBE.
- INSTALL 6 FT. X 30 FT. QUEUE DETECTOR ENCASED IN 1/4 IN. FLEXIBLE TUBING (3-6-3 TURNS).
- INSTALL 24 IN. WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE AT PC.
- ERADICATE EXISTING PAVEMENT LINE MARKINGS - ANY WIDTH.
- INSTALL 12 IN. WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS FOR CROSSWALK.
- EQUIPMENT INSTALLED AS PART OF SIGNAL PROPOSED AT WESTBOUND RAMP INTERSECTION.
- INSTALL GROUND MOUNTED SIGN ON ONE 4 IN. X 6 IN. WOOD POST.
- REMOVE EXISTING GROUND MOUNTED SIGN AND SUPPORTS.
- REMOVE EXISTING GROUND MOUNTED SIGN FROM EXISTING SUPPORT.
- REMOVE EXISTING LEASED-LIGHT AND UTILITY POLE.
- INSTALL SHA STANDARD MD 655.11 PARALLEL TYPE CURB RAMP WITH DETECTABLE WARNING SURFACE PER SHA STANDARD MD 655.40. (SEE NOTE 15) INSTALL TYPE A CURB IN LIEU OF OTHER SIDE FLARE. INSTALL ONE 5 FT. X 5 FT. PORTION OF SIDEWALK AND ONE 5 FT. X 4 FT. PORTION OF TRANSITION SIDEWALK AS SHOWN.
- INSTALL SIDEWALK RAMP PER DETAIL THIS SHEET WITH DETECTABLE WARNING SURFACE PER SHA STANDARD MD 655.40. (SEE NOTE 15).
- INSTALL 5 FT. WIDE CONCRETE SIDEWALK.

SIDEWALK RAMP DETAIL
NORTHWEST QUADRANT
(SCALE 1" = 10')



SIDEWALK RAMP DETAIL
AT CHANNELIZATION ISLAND
(SCALE 1" = 10')



LENHART TRAFFIC CONSULTING

TRAFFIC ENGINEERING & TRANSPORTATION PLANNING

331 Redwood Grove Court Millersville, Maryland 21108
Tel: (410) 987-3888 Fax: (443) 782-2288

UTILITY LEGEND	
SD	STORM DRAIN
G	GAS MAIN
W	WATER MAIN
S	SEWER MAIN
E	ELECTRIC CABLES
A	AERIAL CABLES
T	TELEPHONE CABLES
F	FIBER-OPTIC

GEOMETRIC LEGEND	
---	EXISTING
---	PROPOSED

- GENERAL NOTES
- THE CONTRACTOR SHALL CONTACT MISS UTILITY TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
 - MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MDSHA STANDARD PLATES FOR TRAFFIC CONTROL.
 - THE SHA SIGNAL SHOP WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING. VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER. THE SHA SIGNAL SHOP SHALL PROGRAM CAMERA 'B' TO PICK UP BOTH PRESENCE AND SETBACK DETECTION.
 - SEE DETAIL THIS SHEET FOR SIGNAL HEAD, VIDEO DETECTION CAMERA, AND SIGN LAYOUT.
 - WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
 - ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MDSHA STANDARDS.
 - THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
 - ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, AND MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
 - DISTRICT 6 MAINTENANCE FORCES WILL REMOVE THE D95-25 PANEL AND FLAGS THREE MONTHS AFTER SIGNAL TURN ON.
 - ALL LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCCELL.
 - THE CONTRACTOR SHALL REMOVE AND REPLACE SIDEWALK AT THE NEAREST JOINT AS NECESSARY TO INSTALL PROPOSED CONDUIT, HANDBOXES AND SIDEWALK MODIFICATIONS.
 - THE CONTRACTOR SHALL CENTER CROSSWALKS ON NEWLY CONSTRUCTED RAMPS.
 - THE CONTRACTOR SHALL REFER TO MD-MUTCD FIGURE 3B-17a FOR CROSSWALK HATCH DETAIL.
 - PLACE 24 IN. WIDE DETECTABLE WARNING SURFACE ALONG THE FULLY DEPRESSED PORTION OF THE PROPOSED RAMPS. THE MAT SHALL NOT EXTEND ONTO THE SIDE FLARES.

NOTE:

THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF ONE (1) YEAR. SHOULD CONSTRUCTION NOT BEGIN WITHIN THIS TIME FRAME, THESE PLANS SHALL BE NULL AND VOID WITH A RE-REVIEW FROM THE TRAFFIC ENGINEERING DESIGN DIVISION.

EAPD PERMIT NO. _____

APPROVALS	
TEAM LEADER	2/4/09
ASST. DIV. CHIEF	2/4/09
DIVISION CHIEF	2/17/09
OFFICE DIRECTOR	

REVISIONS	

SHA STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION	
WILLOW BROOK ROAD (MD 639) AT I-68 EASTBOUND RAMPS	
TRAFFIC SIGNALIZATION PLAN	
SCALE 1" = 20' DATE FEBRUARY 2009 CONTRACT NO. BW996M82	
DESIGNED BY MML	COUNTY ALLEGANY
DRAWN BY MML	LOGMILE 01083900.06
CHECKED BY MML	T.I.M.S. NO. J332
F.A.P. NO. N/A	TOD NO.
DRAWING NO. TS-4704	OF
SHEET NO.	OF